

to attain the above object, and as a result discovered that the above object can be attained through materials comprising specific inorganic materials and copper compounds (including copper oxides), thus achieving the present invention.

That is, the present invention relates to automobile exhaust gas purifying combustion catalysts, methods of manufacturing the same, and an automobile exhaust gas purifying method as follows.

1- An automobile exhaust gas purifying combustion catalyst, comprising a calcium salt, amorphous silica, and a copper compound (the first invention).

2- An automobile exhaust gas purifying combustion catalyst, comprising amorphous silica, and a copper compound (the second invention).

3- An automobile exhaust gas purifying combustion catalyst, comprising (1) at least one of crystalline silica and amorphous silica, (2) a calcium salt, and (3) a copper oxide (the third invention).

4- An automobile exhaust gas purifying combustion catalyst, comprising (1) at least one of crystalline silica and amorphous silica, and (2) a copper oxide (the fourth invention).

5- A method of manufacturing the automobile exhaust gas purifying combustion catalyst ~~according to claim 1, of the first invention,~~ comprising reacting a calcium silicate and a copper salt together.

6- A method of manufacturing the automobile exhaust gas purifying combustion catalyst ~~according to claim 2 of the second invention,~~ comprising reacting a calcium silicate and a copper salt together, and washing the reaction product obtained with water, or washing the reaction product obtained with water after carrying out acid treatment or treatment with an aqueous copper salt solution.

~~7. A method of manufacturing the automobile exhaust gas purifying combustion catalyst according to claim 3 of the third invention,~~ comprising reacting a calcium silicate and a copper salt together, and baking the reaction product obtained.

~~8. A method of manufacturing the automobile exhaust gas purifying combustion catalyst according to claim 4 of the fourth invention,~~ comprising reacting a calcium silicate and a copper salt together, washing the reaction product obtained with water, or washing the reaction product obtained with water after carrying out acid treatment or treatment with an aqueous copper salt solution, and then further baking.

~~9. A method of manufacturing the automobile exhaust gas purifying combustion catalyst according to claim 4 of the fourth invention,~~ comprising reacting a calcium silicate and a copper salt together, baking the reaction product obtained, and then further washing with water, or washing with water after carrying out acid treatment or treatment with an aqueous copper salt solution.

~~10. The method according to any of claims 5 to 9, wherein~~ In one embodiment, in any of the methods described above, the copper salt reacted with the calcium silicate is copper oxalate.

~~11. An~~ The present invention also provides an automobile exhaust gas purifying combustion catalyst obtained by any of the method according to any of claims 5 to 9 methods described above.

~~12. An~~ In one embodiment, any of the automobile exhaust gas purifying combustion catalyst according to any of items 1 to 4 and 11, catalysts described above is used for removing carbon monoxide and/or propylene contained in automobile exhaust gas.

~~13. An~~ In another embodiment, any of the automobile exhaust gas purifying combustion catalyst according to any of items 1 to 4 and 11, catalysts described above is used for converting

carbon monoxide and/or propylene contained in automobile exhaust gas into carbon dioxide and/or water.

14. ~~An~~ The present invention also provides an automobile exhaust gas purifying method, comprising bringing any of the automobile exhaust gas purifying combustion catalyst ~~according to any of claims 1 to 4 and 11~~ catalysts described above into contact with automobile exhaust gas.

Following is a detailed description of the automobile exhaust gas purifying combustion catalysts, the